

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Marc Christian Davis)	
)	Examiner: Graham, Mark S
Serial No.: 10/606,987)	
)	Art Unit: 3711
Filed: June 26, 2003)	
)	Deposit Acct. No.: 503176
Title: Laminated ball bat with engineered)	
Sweet spot zone and method of making)	
Same)	

Commissioner of Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

APPEAL BRIEF

In response to an Office Action mailed on October 16, 2006, this supplemental Appeal Brief pursuant to 37 C.F.R. §41.37(d) is submitted. A list of the various sections contained in this Appeal Brief is provided below.

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(1) REAL PARTY OF INTEREST

The real party of interest is Davis et al. which is the party named in the caption of this Appeal Brief.

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

(3) STATUS OF CLAIMS

Claims 1-8, 10-21, and 23-25 remain pending in the application. Of such claims, claim 1 and claim 13 are independent claims.

Claims 26-31, and 34-53 have been withdrawn from consideration while claims 9, 22, 32, and 33 have been canceled.

It should be noted that the most recent Office Action dated July 5, 2006 states that, claims 1-8, 11-21, 23-31 and 34-53 are pending in the application. As described below, it is respectively submitted that of claims 23-31, only claims 23-25 remain pending. Additionally, claim 10 remains pending.

The original application filed on June 26, 2003 included claims 1-31. A May 7, 2004 Office Action contended that such claims were subject to a restriction requirement and separated such claims into two groups: Group I claims included 1-25 and Group II claims included 26-31.

In an August 25, 2004 Office Action response, Group I (claims 1-25) was elected and Group II (claims 26-31) were withdrawn and filed in a continuing application which has recently been allowed.

In a March 4, 2005 response to a Final Action, Applicants submitted an RCE canceling claims 9 and 22 while adding new claims 32 and 33. At this point, claims 1-8, 10-21, 23-25, and 32-33 remained in the application.

In a November 14, 2005 response to an Office Action dated September 09, 2005, claims 32 and 33 were canceled. At this point claims 1-8, 10-21, and 23-25 remained in the application.

In May 24, 2006 response to a Final Office Action dated February 1, 2006 Applicants filed a second Request for Continued Examination adding claims 34-53 to the application. At this point, claims 1-8, 10-21, 23-25, and 34-35 remained in the application.

In a July 5, 2006 Office Actions, the newly submitted claims 34-35 were deemed to be directed to an invention that is independent or distinct from the invention originally claimed and previously elected as described above. Group 1 claims include 1-8, 10-21¹, and 23-25 while Group 2 claims include 34-53. The Examiner constructively elected Group I since Applicants had previously elected and received an action on the merits for Group I claims and Group II claims were withdrawn from consideration.

(4) STATUS OF AMENDMENTS

No amendments touching on the merits of a claim are requested. All requested amendments, if any, have been entered by the Examiner.

¹ The office action states Group I is 1-8, 11-21, and 23-25. However, Group I claims should also include claim 10.

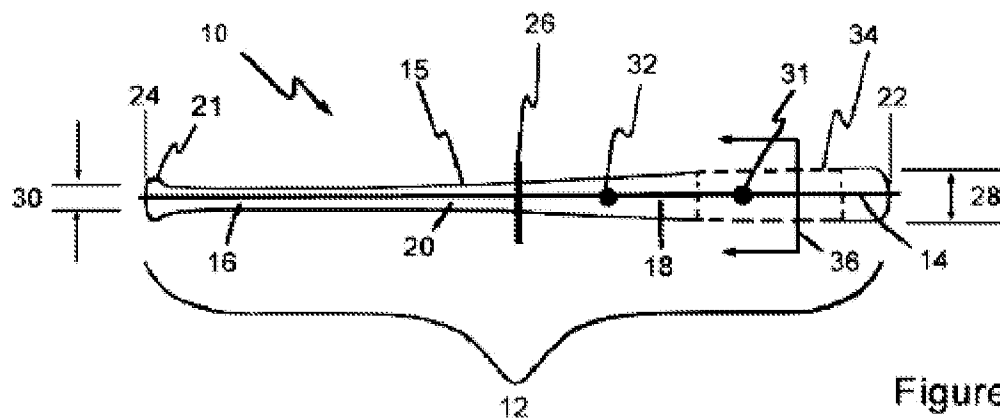
(5) SUMMARY OF CLAIMED SUBJECT MATTER

This section provides a concise explanation (as concise as possible) of the subject matter defined in each of the independent and dependent claims specifically address in this appeal. It should be appreciated that such a concise explanation may not provide an exact description of the full scope of the claimed invention.

Claim 1 and Claim 13 are the independent claims involved in the appeal. In addition to claim one, dependent claims 5, 6, and 7 (which depend from claim 1) and dependent claims 17, 18, and 19 (which depend from claim 13) are specifically addressed in this appeal.

Independent Claim 1

Independent Claim 1 relates to laminated² ball (10) having a predetermined exterior outline (12, 15) as shown in Fig.1 provided below.



² see Applicants' Application [Page 2, L18 - L23] for definition.

The body of the bat comprises at least a first plurality (44a – 44d) and second plurality (56a – 56d) of thin strips³: one embodiment of which is depicted in Fig. 2 provided below.

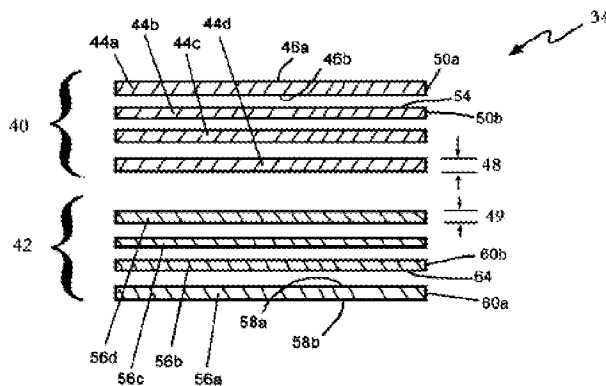


Figure 2

The first plurality of thin strips defines a first bat portion (40) and a second plurality of thin strips defines a second bat portion (42). At least one thin strip of such first plurality of thin strips is composed of a first material while at least one strip of such second plurality of thin strips is composed of a second material. The first and second materials are selected so that the density of the first bat portion differs from the density of the second portion⁴.

Additionally, claim 1 further requires “the density of said first portion, the density of said second portion, the location of said first portion, and the location of said second portion”⁵ to be selected to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point.⁶ [emphasis added]

³ see Applicants’ Application [Page 10, L9 – Page 11, L19] for a description of one possible embodiment of said first and second plurality of thin strips.

⁴ see Applicants’ Application [Page 15, L22 – Page 16, L5] as one example of such teachings.

⁵ see Applicants’ Application, last limitation of Claim 1.

⁶ see Applicants’ Application [Page 12, L14 – Page 14, L1] as one example of such teachings as well as Applicants’ Application [Page 20, L12 – Page 24, L7] as well as the specification in general.

Dependent Claim 5

Depend claim 5 further requires the first and second bat portions to be disposed apart from each other. Figure 10 (provided below) depicts an alternative embodiment of the claimed invention comprising a plurality of bat portions where at least one bat portion (152 for example) is disposed apart from a second bat portion (148 for example).

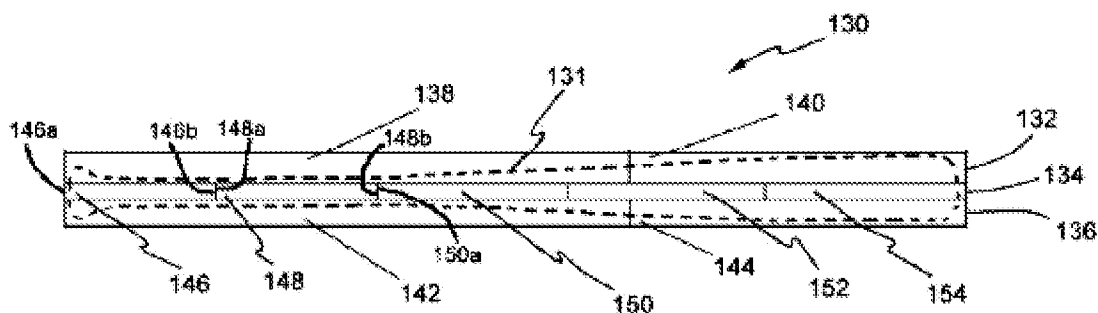


Figure 10

Dependent Claims 6 and 7

Dependent claims 6 and 7 further limit the claim 1 invention by limiting the thickness of the thin strips to a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.⁷

Independent Claim 13

Independent claim 13 is similar to claim 1 with at least the following notable differences:

(a) claim 13 comprises *three* bat portions with each bat portion defined by a plurality of thin strips where the length of the first bat portion differs from the length of the second bat portion of the bat; and (b) wherein the density of said first portion, the density of said second portion, the density of said third portion, the location of said first portion, the location of said second portion,

⁷ see Applicants' Application [Page 10, L31 – Page 11, L2] as one example of such teachings.

and the location of said third portion are selected to provide for a bat having a center of mass located at a predefined point from the barrel end of the bat.

The same basic teachings cited above for claim 1 apply equally to claim 13.

Dependent Claim 17

Depend claim 17 further requires the first, second and third bat portions to be disposed apart from each other. Figure 10 (provided above) depicts one exemplary embodiment of the claimed invention.

Dependent Claims 18 and 19

Dependent claims 18 and 19 further limit the claim 1 invention by limiting the thickness of the thin strips to a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.⁸

(6) GROUND OF REJECTION TO BE REVIEWED ON APPEAL

This section presents a concise statement of each ground of rejection presented for review.

Independent Claim 1 and Depend Claims 5, 6, and 7

Issue I: For claim 1, the issue is whether or not Bender et al. 6,007,440 alone or in view of Smith 1,706,680 makes the Applicants' claim 1 invention obvious where such claim 1 invention is a laminated bat comprising at least two bat portions wherein each bat portion is composed of a plurality of thin strips, wherein the first plurality of thin strip material is different from the second plurality of thin strips material so that the density of the two portions are different and wherein the location of such bat portions are selected to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline.

⁸ see Applicants' Application [Page 10, L31 – Page 11, L2] as one example of such teachings.

- Issue II: That while the Examiner admits that Bender does not teach using different first and second materials to obtain different densities as claimed by the Applicants' to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline, such a technique is known in the art and taught by Smith.
- Issue III: That Bender inherently teaches manufacturing a bat with a *predetermined* "sweet spot zone" or "center of mass" location as claimed by the Applicants.
- Issue IV: That combining Cook with Bender and Smith makes obvious Applicants' claim 5 limitation requiring bat sections of different densities to be position apart from each other to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline.

Independent Claim 13 and Depend Claims 17, 18, and 19

- Issue V: For claim 13, the issue is whether or not Bender et al. 6,007,440 in view of Smith 1,706,680 makes the Applicants' claim 13 invention obvious where such claim 13 invention is a laminated bat comprising at least three bat portions wherein each bat portion is composed of a plurality of thin strips, wherein the first plurality of thin strip material is different from the second plurality of thin strips material so that the density of the first portion is different from the second portion and "wherein the density of said first portion, the density of said second portion, the density of said third portion, the location of said first portion, the location of said second portion, and the location of said third portion *are selected* to provide for a bat having a *center of mass located at a predefined point from the barrel end of the bat*" for a bat having a predetermined exterior outline.
- Issue VI: That while it is admitted that Bender does not teach using different first and second materials to obtain different densities as claimed by the Applicants' to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline, such a technique is known in the art and taught by Smith.
- Issue VII: That Bender inherently teaches manufacturing a bat with a *predetermined* "sweet spot zone" or "center of mass" location as claimed by the Applicants.
- Issue VIII: That combining Cook with Bender and Smith makes obvious Applicants' claim `17 limitation requiring bat sections of different densities to be position apart from each other to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point *are selected* to provide for a bat having a center of mass located at a predefined point from the barrel end of the bat for a bat having a predetermined exterior outline.

Issue VIII I: Whether or not Bender et al. discloses inter lamina that are of the claimed thickness of “about 1/32nd (0.03125 inches) of an inch to about 1/12th (0.08333 inches)” required by claims 6, 7, 18, and 19.

(7) ARGUMENT

The Applicants’ respectfully traverse the grounds for rejection describe above for claims 1-8, 10-21, and 23-25 and submit the following arguments.

As an initial matter, it should be appreciated that by relying on 35 U.S.C. 103(a) for the basis of rejection for the above described claims, the Examiner concedes that none of the cited references alone contain or teach all of the elements found in Applicants’ claimed invention.

BACKGROUND

In hopes of better explaining the invention, the weight distribution of hollow Aluminum bats are first described as such an explanation may prove helpful in understanding Applicants’ claimed invention.

Consider the weight distribution properties of hollow aluminum bats. Such bats offer far more flexibility in engineering the location of the center of mass compared to the typical solid wood bats. For hollow aluminum bats, the thickness of the aluminum at points along portions of the bat may be varied to change that portion’s weight which in turn affects the location of the bat’s center of mass while maintaining a particular bat length and overall shape. Restated, the bat’s length/weight properties are decoupled. Thus, two aluminum bats may have identical external shapes and lengths but still have a different center of mass location as the thickness of the aluminum used to make such bats may be different for different portions of the bat. Importantly, such bats will have different sweep spot zone characteristics.

Typical ***solid*** wood bats cannot take advantage of such a feature as such bats are solid. However, using Applicants' invention, the center of mass for a solid wood bat may be varied while maintaining a particular bat shape, length and overall weight. Notably, it is respectfully submitted that the Examiner has failed to show where any of the prior art of record teaches, suggest or makes obvious such a feature for solid wood bats.

35 U.S.C. §103, Obviousness Rejections : Independent Claims 1 and 13

Claims 1-4, 6, 7, 10-16, and 18-20, and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680.

Issue I: For claim 1, the issue is whether or not Bender et al. 6,007,440 alone or in view of Smith 1,706,680 makes the Applicants' claim 1 invention obvious where such claim 1 invention is a laminated bat comprising at least two bat portions wherein each bat portion is composed of a plurality of thin strips, wherein the first plurality of thin strip material is different from the second plurality of thin strips material so that the density of the two portions are different and wherein the location of such bat portions are selected to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline.

Issue V: For claim 13, the issue is whether or not Bender et al. 6,007,440 in view of Smith 1,706,680 makes the Applicants' claim 13 invention obvious where such claim 13 invention is a laminated bat comprising at least three bat portions wherein each bat portion is composed of a plurality of thin strips, wherein the first plurality of thin strip material is different from the second plurality of thin strips material so that the density of the first portion is different from the second portion and "wherein the density of said first portion, the density of said second portion, the density of said third portion, the location of said first portion, the location of said second portion, and the location of said third portion are selected to provide for a bat having a center of mass located at a predefined point from the barrel end of the bat" for a bat having a predetermined exterior outline.

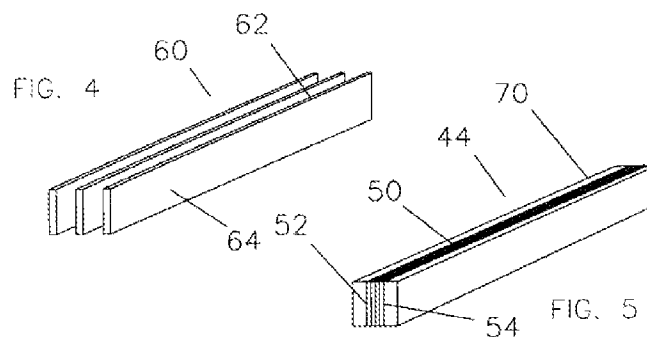
Bender et al.

The Bender et al. teachings are initially considered. Bender et al. teaches constructing a bat where "glued laminations is provided wherein non-destructive tests are performed on each lamina used in the construction, and also includes a test of the entire finished bat. Laminas of different thicknesses allows a targeted increase in the strength of the weaker areas of the bat

without adding undue cost to the construction.”⁹ Bender et al. describes such a bat as comprising “glued laminations . . . where the inner layer is typically formed of wood of a superior grade and strength to that of the outer layer.”¹⁰ Bender et al. further teaches that another advantage of the Bender et al. bat is to provide a bat that “includes the use of glued laminations, wherein an inner layer is formed of a plurality of thinner inner laminas and each outer layers is typically formed from a single thicker outer lamina, thereby focusing the strength improvement in the handle and area between the handle and barrel that is most likely to break.”¹¹

Bender et al. further teaches:

The ball bat is constructed of an inner layer 50 bounded by first and second outer layers 70. The inner layer typically contains four inner lamina 60 bonded together, while the first and second outer layers typically contain a single outer lamina 80. The inner laminas 60 form the handle 20 and the medial portion of the barrel of the bat. The outer laminas 80 form lateral portions of the barrel 30 of the bat, and are gently tapered toward the handle of the bat. *The thickness and relative position of each lamina is related to the results of non-destructive testing of the wood forming that lamina.*¹² [emphasis added]



To achieve the above described laminated bat having the above describes attributers, Bender et al. further teaches that:

The length of the initial wood laminas 42 **must** be selected to be somewhat greater than the length of the bat to be manufactured. The width **must** be

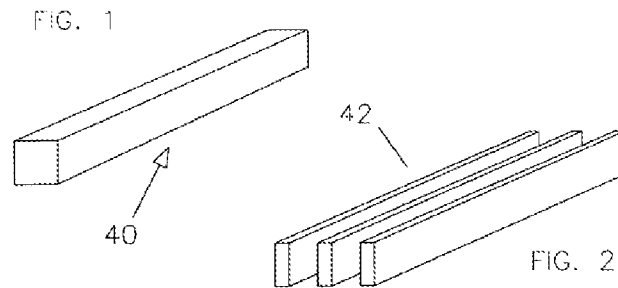
⁹ Bender et al. at C1, L45-L51.

¹⁰ Bender et al. at C2, L49-L57.

¹¹ Bender et al. at C1, L58-L65.

¹² Bender et al. at C3, L39-L50.

greater than or equal to the diameter of the widest point of the barrel of the bat to be manufactured.”¹³ [emphasis added]



Thus, Bender et al. teaches making a bat using glued laminations where the laminations are *all from the same type of material* (such as ash wood). Non-destructive tests are performed on each lamina used with each lamina graded according to some indicator of quality, such as density and modulus of elasticity. Bender et al. further teaches that the length of each lamina *MUST* be somewhat great than the length of the bat to be manufactured and that the width *MUST* be greater than or equal to the diameter of the widest point of the barrel of the bat to be manufactured.

What is missing from the Bender et al. teachings is at least the concepts of forming a laminated bat comprising at least two bat portions wherein each bat portion is composed of a plurality of thin strips, (1) wherein the first plurality of thin strip *material is different* from the second plurality of thin strips material so that the density of the two portions are different and (2) wherein the location of such bat portions *are selected* to provide for a bat having a center of mass *located between a predefined first-point and a predefined second-point* (3) for a bat *having a predetermined exterior outline*.

Indeed, Bender et al. may teach forming different sections of a laminated bat with wood having different densities, however, Bender et al. teaches away from the Applicants' claimed invention in at least two material ways. First, Bender et al. teaches using the same type of wood

¹³ Bender et al. at C3, L56-L60.

but testing such wood to determine its density. Bender et al. does not teach or even suggest using different types of wood having naturally different densities. Second, Bender et al. teaches that the “length of the initial wood laminas 42 **must** be selected to be somewhat greater than the length of the bat to be manufactured.” In contrast, the Applicants’ claim 1 and claim 13 require the location of the bat portions to be selected to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predefined exterior outline. It should be appreciated that the Applicants’ bat portions must have at least one of different lengths or widths for their position to be selectable **for a predefined exterior outline**. Indeed, Applicants’ claim 13 invention specifically requires the “length of the first portion of the bat [to differ] from the length of the second portion of the bat.” Additionally, the Applicants’ bat sections may have different widths.

It is appreciated that after the Bender et al. laminated block is machined into the shape of a bat, some outer barrel portions will be a different length compared to the middle portions that run the full length of the bat. It seems clear, however, that Bender et al. must vary the exterior outline of a bat to affect the location of the bat’s center of mass for a particular lamina configuration as the laminas **MUST** run the full length and the full width of the bat before machining. Such teachings are in stark contrast to the Applicants’ claimed invention where the position of the bat portions (and block portions that are machined into the bat) are selectable to engineer the location of a bat’s sweet spot zone and/or center of mass for a predefined exterior outline.

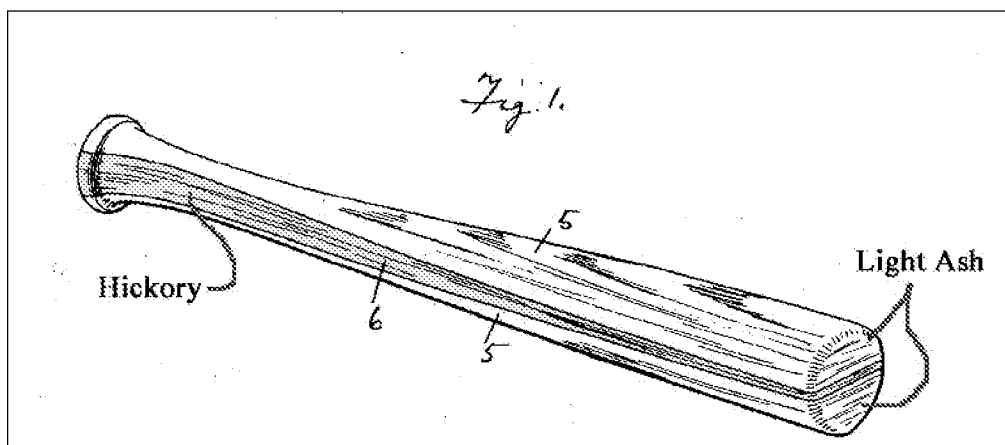
It is respectfully submitted that for all the above reasons, Bender et al. does not teach or make obvious a laminated bat comprising at least two bat portions wherein **each** bat portion is composed of a plurality of thin strips, wherein the first plurality of thin strip **material is**

different from the second plurality of thin strips material so that the density of the two portions are different and wherein the location of such bat portions *are selected* to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat *having a predetermined exterior outline*.

The issue becomes, then, whether or not Smith 1,706,680 provides the missing teachings. It is respectfully submitted that Smith does not.

Smith

The Smith reference is now considered. The Smith bat is shown in modified Fig. 1 below:



Smith does teach a bat comprising “a plurality of layers of wood, in laminated form, the outermost laminations (5) being of light ash or equivalent wood and the center lamination being of hickory (6) or equivalent wood.” It should be noted that Smith does not teach using a plurality of thin strips.

The present invention relates to a base ball bat and has for its prime object to provide a bat comprising a plurality of layers of wood, in laminated form, the two outermost laminations being of light ash or equivalent wood and the center lamination being of hickory or equivalent wood, thereby providing a bat which is exceedingly strong and durable, yet light and well balanced.

[Smith C1, L1-L9]

In addition, Smith teaches shaping the hickory lamination to bring “the weight of the bat back to the handle or batter, thereby providing a good balance.”

strength. The hickory insert is inlaid about one-eighth of an inch at the large end of the bat or batting end and tapering back to about three quarters of an inch or larger at the handle making a very strong bat, and also brings the weight of the bat back to the handle or batter, thereby providing a good balance. It is also to be noted that the grain of the laminations extend in parallelism with the laminations and with one another, so that the bat is very hard to break, when properly used with the “grain up” as is the common expression in base ball parlance.

[Smith, C2, L41-L52]

Thus, Smith teaches making a bat having three bat portions where each bat portion comprise one strip of wood and where the wood strip for one bat portion is made from a different wood compared to the other two portions. In addition, Smith teaches shaping the center portion to “provide good balance.”

Such teachings alone or in combination with Bender et al. still do not make obvious the Applicants’ claimed invention obvious as neither Smith nor Bender et al. teach using bat portions that may be selectively positioned to strategically position the bats sweet spot zone at a predefined position along the length of the bat for a bat having a predetermined exterior an outline. Indeed, it is respectfully submitted that the Examiner has not shown where either

Bender et al. or Smith provide any teaching relating to selectively positioning the sweet spot zone of a bat.

Attention now is directed to Grounds of Rejection Issues II and VI.

- Issue II: Claim 1: That while the Examiner admits that Bender does not teach using different first and second materials to obtain different densities as claimed by the Applicants' to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline, such a technique is known in the art and taught by Smith.
- Issue VI: Claim 13: That while it is admitted that Bender does not teach using different first and second materials to obtain different densities as claimed by the Applicants' to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline, such a technique is known in the art and taught by Smith.

The Examiner admits that Bender et al. does not teach using different wood having different densities as claimed by the Applicants. However, the Examiner contends that "knowledge generally available to one of ordinary skill in the art teaches that different densities may be obtained by using different materials." It is true that it was known that different wood types have different densities before filing date of both the Applicants' application and the application leading to Smith. It should also be appreciated that knowledge generally available to one of ordinary skill in the art before the filing date of the application leading to Bender et al. teaches that two pieces of the same type of wood will have different properties such as density. Yet the application leading to Bender et al. was allowed over similar prior art in spite of such common knowledge. It is respectfully submitted that Bender et al. issued because it has been well established that "simplicity and hindsight are not proper criteria for resolving the issue of obviousness."¹⁴ Every invention is obvious using hindsight after reading an enabling description of the invention. What seems clear is that it was not obvious to Bender et al. to use different

¹⁴ Ex parte Clapp, 227 U.S.P.Q. 972, 973 (PTO Bd. App. 1985).

wood types to achieve bat portions with different densities and having different lengths so that such bat portions may be selectively positioned to selectively position a bat's sweep spot zone at a predefined location along the length of a bat. Nor does Smith provide such teachings.

Attention is now directed to Grounds of Rejection Issues III and VII.

Issue III: Claim 1: That Bender inherently teaches manufacturing a bat with a *predetermined* "sweet spot zone" or "center of mass" location as claimed by the Applicants.

Issue VII: Claim 13: That Bender inherently teaches manufacturing a bat with a *predetermined* "sweet spot zone" or "center of mass" location as claimed by the Applicants.

The Examiner states that "Bender's bat, just as applicant's, necessarily has its "sweet spot zone" or "center of mass" determined by the choices involved in selecting the lamina used in the bat." [Office Action date 07/05/2006 at Page 4]. The Examiner appears to ignore the requirement for a *predetermined exterior outline*. Bender et al. cannot alter the weight distribution of the Bender et al. bat for a particular lamina configuration by selectively positioning the various bat portions as the bat portions run the full length and width of the bat when in block form. Additionally, Bender et al. requires the two outer sections to be less dense than the inter sections. Consequently, the weight distribution may only be altered by machining the block differently for a particular lamina configuration. In contrast, the Applicants' bat portions are configured and sized to allow the position of the Applicants' bat portions to be selected thereby allowing the weight distribution of a bat to be altered for a particular lamina configuration and for a predetermined exterior outline.

It is true that anything with mass will have a center of mass and that the first bat made and every bat since has had a center of mass (and a sweet spot zone). The Applicants' do not claim to have invented a bat having a center of mass. The Applicants' claim a bat having a

plurality of bat portions with at least two bat portions having different densities and associated weights where the position of such bat portions are selectable to provide for a bat having a sweet spot zone at a predefined location along the length of a bat *for a particular bat outline*. As noted above, the Bender et al. bat portions are not selectable as claimed by the Applicants'. Indeed, Bender et al. provides no teaching relating to a bats center of mass or sweet spot zone or how to selectively position either by manipulating the position of the bat portions.

Based on the above arguments, it is respectfully submitted that none of the secondary references suggest nor do they provide motivation to combine the teachings of the various secondary references with the Bender et al. teachings to achieve the Applicants' claim 1 and 13 inventions. It is respectfully submitted, therefore, that none of the cited secondary references overcome the above identified deficiency in the base reference. The remaining depend claims simply add further patentably distinguishable features to the claim 1 and 13 inventions. For at least these reasons, Applicants respectfully traverse the above identified 103 rejections and submit that the rejected claims are in condition for allowance.

35 U.S.C. §103, Obviousness Rejections : Claims 5 and 17

Claims 5 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680 and Cook 4,714,251. Claims 5 and 17 are presented below:

5. (previously presented) A solid laminated ball bat as in claim 1, wherein first and second portions are disposed apart from each other.

17. (previously presented) A laminated ball bat as in claim 13, wherein said first, second and third portions of the bat are disposed apart from each other.

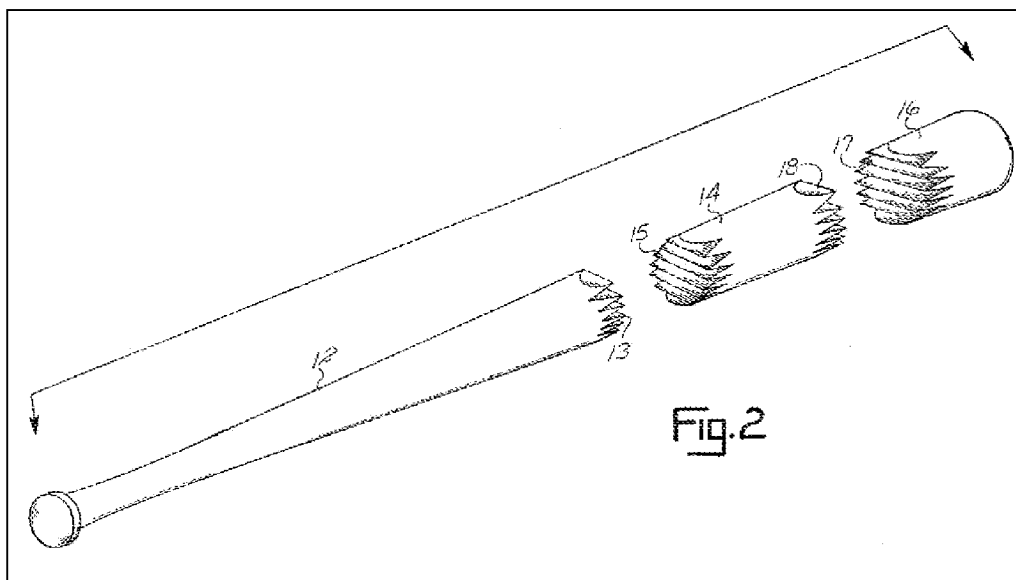
Issue IV: That combining Cook with Bender and Smith makes obvious Applicants' claim 5 limitation *requiring bat sections of different densities to be position apart from each*

other to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline.

Issue VIII: That combining Cook with Bender and Smith makes obvious Applicants' claim 17 limitation ***requiring bat sections of different densities to be position apart from each other*** to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point for a bat having a predetermined exterior outline.

Cook

The Cook Reference is now considered. Cook teaches a bat comprising three distinct solid wood bat portions glued together to form the bat. Cook Fig. 2 is presented below:



It should be appreciated that bat sections 12, 14 and 16 are SOLID wood sections and not strips of wood glued together. Cook provides the following teachings:

The ball bat 10 shown in the drawings includes three distinct portions, namely, a handle portion 12, an intermediate or ball-striking portion 14, and a barrel end portion 16. [Cook, C1, L58-60]

A complete bat 10 is first formed in individual parts. Handle ***portion 12*** is formed of a ***light wood***, preferably white ash and includes formed finger joints 13. In a 34-inch bat, the handle portion 12 will be approximately 23 inches in length. Ball-striking ***portion 14*** is formed of a ***heavy wood***, preferably hickory, and includes formed finger joints 15, 18 at each end thereof. Striking portion 14 is approximately 7 inches in length. Bat barrel ***end portion 16*** is formed of a ***soft wood***, such as soft maple, and includes finger joints 17. [Cook C2, L5-L19]

As presented above, Cook teaches forming three solid bat sections each made from different types of wood and then joining the three bat sections to form a bat. Notably two of the bat sections having different densities will be disposed apart from each other.

The stated objectives of the Cook invention is to: (1) provide for an improved laminated baseball bat, (2) provide for a laminated baseball bat which is more durable than previous bats, and (3) provide for a laminated baseball bat which reduces slide-off spin of a batted ball.

Note that Cook does not mention engineering the sweet spot zone of the bat using a plurality of bat sections composed of thin strips having different densities where the bat sections are disposed apart from each other as claimed by the Applicants'. The Examiner has merely found elements in separate prior patents that are similar to the Applicants' claim 5 and claim 17 inventions. The Examiner has not shown where such references teach obviously combining the three references to create the Applicants' claimed inventions.

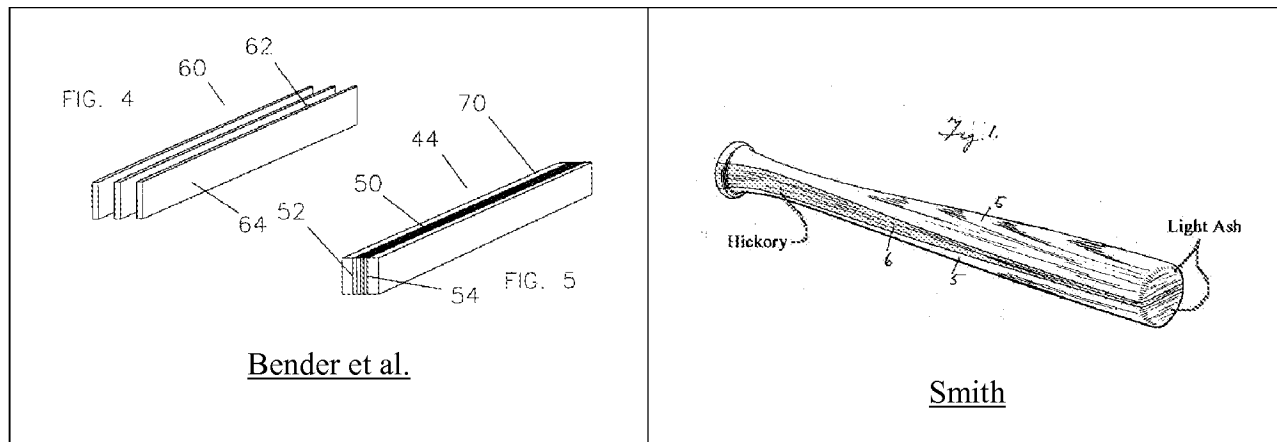
As is well known, "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so."¹⁵ (emphasis original) Indeed, "virtually all inventions are necessarily combinations of old elements. The notion, therefore, that combination claims can be declared invalid merely upon finding similar elements in separate prior patents would necessarily destroy virtually all patents and cannot be the law under the statute, ' 103.'"¹⁶ Consequently, "the task of the Patent Office is essentially a burden of proof not just to show prior patents with

¹⁵ Graham v. John Deere Co., 381 U.S. 1, 148 U.S.P.Q. 459 (S. Ct. 1966)

¹⁶ Panduit Corp. v. Dennison Manufacturing Co., 1 U.S.P.Q. 2d 1593, 1603 (Fed. Cir. 1987; footnotes omitted).

selected elements similar to respective parts of a claimed combination, but to show teachings to support obviously combining the elements in the manner claimed.”¹⁷

Additionally, the Examiner has not shown how one could combine the Cook teachings with either Bender et al. and/or Smith. The Bender et al. and Smith bats are again presented below:



As previously noted above, the lamina of both the Bender et al. block (which is machined into a bat) and the Smith bat run the full length of the bat. For Bender et al. bat, the outer lamina (80) form the lateral portions of the barrel while the inter laminas (60) form the handle and the middle portion of the barrel. Bender et al. teaches that the lamina (80) are substantially equal in density but different compared to inter laminas (60) and that the inter laminas (60) are to be positioned between and adjacent to outer lamina (80).

Similarly, Smith's teaches the outermost laminations (5) are constructed from a light ash or equivalent wood while the center lamination being of hickory (6) or equivalent wood.” Thus, for the Smith bat, the outer lamina are to have a first density while the inter lamina is to have a second density and the inter lamina is to be positioned between and adjacent to the outer lamina.

¹⁷ ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

Applicants' claim 5 and 17 inventions both require the first and second bat portions to be disposed apart from each other. It should be appreciated that the first portion of Applicants' bat has a different density compared to the second portion of the bat. Restated, claims 5 and 17 require the bat portions of different density to be positioned apart from each other, not adjacent.

Thus, it is respectfully submitted that not only is there no showing of teachings to support obviously combining the elements of the various references in the manner claimed, it should be clear that the Cook teachings are not compatible with either the Bender et al. or Smith teachings as one cannot form either the Bender et al. or Smith bats where the first and second portions (with different densities) are disposed apart from each other. Restated, both the Bender et al. and Smith bat portions having different densities are necessarily adjacent to each other.

Based on the above arguments, it is respectfully submitted that none of the secondary references suggest nor do they provide motivation to combine the teachings of the various secondary references with the Bender et al. teachings to achieve the Applicants' claim 5 and 17 inventions. It is respectfully submitted, therefore, that none of the cited secondary references overcome the above identified deficiency in the base reference. For at least these reasons, Applicants respectfully traverse the above identified 103 rejections and submit that the rejected claims are in condition for allowance.

35 U.S.C. §103, Obviousness Rejections : CLAIMS 6, 7 and 18, 19

Issue VIII I: Whether or not Bender et al. discloses inter lamina that are of the claimed thickness of “about 1/32nd (0.03125 inches) of an inch to about 1/12th (0.08333 inches)” required by claims 6, 7, 18, and 19.

Bender et al. provides the following teachings regarding the thickness of the lamina used in the Bender et al. bat.

The higher density initial lamina, having been segregated for use in the construction of the handle and central portion of the barrel, should then be cut again, thereby creating a number of inner lamina 60. The cutting process typically reduces the thicknesses of the inner lamina to approximately 0.30 inches. Typically, where each of the initial laminas are 1" in thickness, three inner laminas may be cut from each initial lamina. Having cut three inner laminas 60 from one initial lamina, the inner laminas are then planed to a thickness of 0.25 inches in a preferred embodiment.

In a preferred embodiment of the invention, four inner lamina 60 are used in the construction of the inner layer 50, which forms the handle and inner barrel portion of the bat. Where four inner lamina are used, each typically has a thickness of 0.25 inches. However, a greater or lesser number of inner laminas, each having a greater or lesser thickness could be substituted. In a preferred embodiment, the total thickness of the inner layer 50, which includes of all of the inner lamina 60 used in the construction of the handle and central barrel portion of the ball bat, is approximately 1.0 inch. In general, use of a greater number of inner lamina will result in each lamina being thinner.¹⁸

As for dependent claims claim 6, 7, 18, and 19, such claims require the thin strips making up the bat to have a thickness between (a) about 1/32nd (0.03125) of an inch to (b) about 1/12th (0.08333) of an inch. Thus Bender et al. teaches preferred lamina thicknesses (0.25 inches) that is about **3 times grater** than the Applicants’ maximum thickness of 1/32nd (0.03125) of an inch. It is respectfully submitted that one of ordinary skill in the art would not consider the Bender et al. thickness to be in the same range of the Applicants’ claim 6, 7, 18, and 19 claimed thicknesses.

¹⁸ Bender et al. at [C4, L31 – L42].

For at least this reason, it is respectfully submitted that claims 6, 7, 18, and 19 are patentable over the cited references alone or in combination.

(8) CLAIMS Appendix

Claims 1-8, 10-21, and 23-25 remain pending in the application. Claim 1 and Claim 13 are independent claims.

1. *(previously presented)* A solid laminated ball bat having a predetermined exterior outline, comprising:

an elongated body disposed about a longitudinally extending axis, said body having an outer surface defined by the exterior outline of the bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between said handle and said barrel;

said bat including in at least one of said handle, said barrel and said label section, at least a first plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said first plurality of bonded together strips defining a first portion of the bat;

said bat further including in at least one of said handle, said barrel and said label section, at least a second plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at

least one face of one of said strips being bonded to a face of an adjacently disposed strip, said second plurality of bonded together strips defining a second portion of the bat;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material;

wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first portion of the bat differs from the density of the second portion of the bat; and

wherein the density of said first portion, the density of said second portion, the location of said first portion, and the location of said second portion are selected to provide for a bat having a center of mass located between a predefined first-point and a predefined second-point.

2. (previously presented) A solid laminated ball bat as in claim 1, wherein the density of said first portion of the bat is substantially uniform and wherein the density of said second portion of the bat is substantially uniform.

3. (previously presented) A solid laminated ball bat as in claim 1, wherein said bat is a baseball bat.

4. (previously presented) A solid laminated ball bat as in claim 1, wherein said first and second portions are disposed adjacent to one another.

5. (previously presented) A solid laminated ball bat as in claim 1, wherein first and second portions are disposed apart from each other.

6. (previously presented) A solid laminated ball bat as in claim 1, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said

opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

7. (previously presented) A solid laminated ball bat as in claim 1, wherein each of said second plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 1/32nd of an inch to about 1/12th of an inch.

8. (previously presented) A solid laminated ball bat as in claim 1, wherein each of said opposed faces are bonded together by one of an urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

9. (canceled) A solid laminated ball bat as in claim 1, further comprising a sealant applied over said outer surface of the bat.

10. (previously presented) A solid laminated ball bat as in claim 1, further comprising a catalyzed lacquer protectant applied over said outer surface of the bat.

11. (previously presented) A solid laminated ball bat as in claim 1, wherein said first material is composed of a cellulosic material, such cellulosic material being selected from the group consisting of: maple, mahogany, ash, cherry, poplar, gum, tupelo and pine.

12. (previously presented) A solid laminated ball bat as in claim 1, wherein at least one thin strip of said first plurality of thin strips is composed of a composite material.

13. (previously presented) A laminated ball bat having a predetermined exterior outline, comprising:

an elongated body symmetrically disposed about a longitudinally extending axis, said body having an outer surface defined by the exterior outline of the bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected

between said handle and said barrel, said barrel having a free end disposed opposite where said barrel is connected to said label section, said handle having a free end disposed opposite where said handle is connected to said label section, said body defining a mid plane disposed transversely relative to said longitudinal axis and midway between said free end of said barrel and said free end of said handle;

said bat including a first plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the bat, at least one face of one of said thin strips being bonded to a opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a first section of the uninterrupted exterior outline of the bat, said first plurality of bonded together thin strips defining a first portion of the bat, said first portion of the bat defining a first outermost face and a second outermost face disposed opposite said first outermost face;

said bat further including a second plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the bat, at least one face of one of said thin strips being bonded to an opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a second portion of the uninterrupted exterior outline of the bat, said second plurality of bonded together thin strips defining a second portion of the bat, said second

portion of the bat defining a first outermost face and a second outermost face disposed opposite said first outermost face;

said bat further including a third plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the bat, at least one face of one of said thin strips being bonded to a face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a third section of the uninterrupted exterior outline of the bat, said third plurality of bonded together strips defining a third portion of the bat, said third portion of the bat defining a first outermost face and a second outermost face disposed opposite said first outermost face;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material;

wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first portion of the bat differs from the density of the second portion of the bat and the length of the first portion of the bat differs from the length of the second portion of the bat; and

wherein the density of said first portion, the density of said second portion, the density of said third portion, the location of said first portion, the location of said second portion, and the location of said third portion are selected to provide for a bat having a center of mass located at a predefined point from the barrel end of the bat.

14. (previously presented) A laminated ball bat as in claim 13, wherein at least one of said first portion, said second portion, and said third portion have a substantially uniform density.

15. (previously presented) A laminated ball bat as in claim 13, wherein the density of said first portion of the bat differs for the density of said third portion of the bat.

16. (previously presented) A laminated ball bat as in claim 13, wherein at least two of said first, second and third portions of the bat are disposed adjacent to one another.

17. (previously presented) A laminated ball bat as in claim 13, wherein said first, second and third portions of the bat are disposed apart from each other.

18. (previously presented) A laminated ball bat as in claim 13, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about $1/32^{\text{nd}}$ of an inch to about $1/12^{\text{th}}$ of an inch.

19. (previously presented) A laminated ball bat as in claim 13, wherein each of said second plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about $1/32^{\text{nd}}$ of an inch to about $1/12^{\text{th}}$ of an inch.

20. (previously presented) A laminated ball bat as in claim 13, wherein each of said third plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 0.00787 inches to about 0.375 inches.

21. (previously presented) A laminated ball bat as in claim 13, wherein each of said opposed faces are bonded together by one of an urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

22. (canceled) A laminated ball bat as in claim 13, further comprising a sealant applied over said outer surface of the bat.

23. (previously presented) A laminated ball bat as in claim 13, further comprising a catalyzed lacquer protectant applied over said outer surface of the bat.

24. (previously presented) A laminated ball bat as in claim 13, wherein at least one thin strip of said first plurality of thin strips is composed of a cellulosic material selected from the group consisting of: maple, mahogany, ash, cherry, poplar, gum, tupelo and pine.

25. (previously presented) A laminated ball bat as in claim 13, wherein at least one thin strip is composed of a composite material.

26. (withdrawn) A method of making a laminated ball bat, said method comprising the steps of:

providing a first laminated block, said first laminated block comprising a plurality of successively adjacent thin strips wherein adjacent thin strips are bonded together by a bonding agent;

providing a second laminated block, said second laminated block comprising a plurality of successively adjacent thin strips wherein adjacent thin strips are bonded together by a bonding agent wherein the density of said second laminated block differs from the density of said first laminated block;

bonding said first laminated block to said second laminated block to form a laminated blank;

subjecting said laminated blank to a pressure in a range of about 100 pounds per square inch to about 250 pounds per square inch;

maintaining said laminated blank under pressure in said range until said laminated blank has cured thereby forming a cured laminated blank; and

machining said cured laminated blank to form an elongated body disposed about a longitudinally extending axis, said body having an outer surface defined by the exterior outline of a bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between said handle and said barrel.

27. (withdrawn) A method of making a laminated ball bat according to claim 26, further comprising the step of heating said laminated blank with radio frequency waves during the step of subjecting said laminated blank to pressure.

28. (withdrawn) A method of making a laminated ball bat according to claim 26, wherein said successively adjacent thin strips are composed of veneer strips having a thickness of between about 0.00787 inches to about 0.375 inches.

29. (withdrawn) A method of making a laminated ball bat according to claim 26, wherein said bonding agent is one of a liquid urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

30. (withdrawn) A method of making a laminated ball bat according to claim 26, further comprising the step of applying a sealer to said machined laminated bat thereby creating a sealed bat.

31. (withdrawn) A method of making a laminated ball bat according to claim 26, further comprising the steps of sanding said sealed bat to remove any rough areas from the surface of such sealed bat and applying a coat of catalyzed lacquer to said sanded surface.

(canceled) A solid laminated ball bat as in claim 1, wherein said predefined first-point is located a distance of about 6% of the total length of the bat from the barrel end of the bat and said predefined second-point is located a distance of about 18% of the total length of the bat from the barrel end of the bat.

32. (canceled) A solid laminated ball bat as in claim 1, wherein said predefined first-point is located a distance of about 6% of the total length of the bat from the barrel end of the bat and said predefined second-point is located a distance of about 18% of the total length of the bat from the barrel end of the bat.

33. (canceled) A laminated ball bat as in claim 13, wherein said predefined point is located between a distance of about 6% of the total length of the bat from the barrel end of the bat and a distance of about 18% of the total length of the bat from the barrel end of the bat.

34. (withdrawn) A solid laminated blank suitable for machining to form a laminated bat, said laminated blank comprising:

an elongated blank body disposed about a longitudinally extending axis, said blank body having an outer surface defined by the exterior outline of the blank, said blank body composed of a plurality of blank portions;

a first plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said first plurality of bonded together strips defining a first portion of the blank;

a second plurality of thin strips, each thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other, each said strip further defining a peripheral edge connecting said opposed faces, at least one face of one of said strips being bonded to a face of an adjacently disposed strip, said second plurality of bonded together strips defining a second portion of the blank;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material;

wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first portion of the bat differs from the density of the second portion of the bat;

wherein at least one of the length of the first portion of the blank and the width of the first portion of the blank is different from that of the second portion of the blank creating size delta value; and

wherein the density of said first portion, the density of said second portion, the location of said first portion, the location of said second portion, and the size delta value are selected to provide for a blank having a predefined weight distribution.

35. (withdrawn) A solid laminated blank as in claim 34, wherein the laminated blank is machined to form a machined elongated body disposed about said longitudinally extending axis, said machined body having an outer surface defined by the exterior outline of a bat, said body including a handle on one end and a barrel on the opposite end, said body including a label section connected between the handle and said barrel.

36. (withdrawn) A solid laminated blank as in claim 34, wherein the opposed faces of said first plurality of thin strips are substantially perpendicular to the opposed faces of said second plurality of thin strips.

37. (withdrawn) A solid laminated blank as in claim 34, wherein said first plurality of thin strips and said second plurality of thin strips are disposed apart to one another along the width of the bat.

38. (withdrawn) A solid laminated blank as in claim 36, wherein said first plurality of thin strips and said second plurality of thin strips are disposed apart to one another along the length of the bat.

39. (withdrawn) A solid laminated blank as in claim 34, wherein the density of said first portion of the blank is substantially uniform and wherein the density of said second portion of the blank is substantially uniform.

40. (withdrawn) A solid laminated blank as in claim 34, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about $1/32^{\text{nd}}$ of an inch to about $1/12^{\text{th}}$ of an inch.

41. (withdrawn) A solid laminated blank as in claim 40, wherein at least two thin strips of said second plurality of thin strips have a different thickness.

42. (withdrawn) A solid laminated blank as in claim 34, wherein each of said second plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about $1/32^{\text{nd}}$ of an inch to about $1/12^{\text{th}}$ of an inch.

43. (withdrawn) A solid laminated blank as in claim 42, wherein at least two thin strips of said first plurality of thin strips have a different thickness.

44. (withdrawn) A solid laminated blank as in claim 34, wherein each of said opposed faces are bonded together by one of an urea resin formulated with a powdered catalyst and a type 1 waterproof glue formulated with a powdered catalyst.

45. (withdrawn) A solid laminated blank as in claim 34, wherein said first material is composed of a cellulosic material, such cellulosic material being selected from the group consisting of: maple, mahogany, ash, cherry, poplar, gum, tupelo and pine.

46. (withdrawn) A solid laminated blank as in claim 34, wherein at least one thin strip of said first plurality of thin strips is composed of a composite material.

47. (withdrawn) A laminated blank having a predetermined exterior outline suitable for machining into a laminated body having a predefined weight distribution wherein said laminated body is used for striking a ball, said laminated blank comprising:

an elongated blank body symmetrically disposed about a longitudinally extending axis and comprising a plurality of laminated blocks including a first, second and third block;

wherein said first laminated block is composed of a first plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the block, at least one face of one of said thin strips being bonded to an opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form an uninterrupted exterior outline of the block, said first block defining a first portion of the blank;

wherein said second laminated block is composed of a second plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the block, at least one face of one of said thin strips being bonded to an opposed face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form an uninterrupted exterior outline of the block, said second plurality of bonded together thin strips defining a second portion of the blank;

wherein said third block is composed of a third plurality of thin strips, each said thin strip defining a pair of opposed faces, each said face defining a substantially flat plane, each said plane being substantially parallel to the other plane, each said thin strip further defining a peripheral edge connecting said opposed faces and defining a section of the exterior outline of the block, at least one face of one of said thin strips being bonded to a face of an adjacently disposed thin strip such that the peripheral edges of said pair of adjacently disposed and bonded thin strips form a third section of the uninterrupted exterior outline of the blank, said third plurality of bonded together strips defining a third portion of the blank;

wherein at least one thin strip of said first plurality of thin strips is composed of a first material and wherein at least one thin strip of said second plurality of thin strips is composed of a second material;

wherein the density of the first material differs from the density of the second material; and

wherein the length of the first block differs from the length of the second block thereby defining a length delta.

48. (withdrawn) A laminated blank having a predetermined exterior as in claim 47, wherein the density of said first block, the density of said second block, the density of said third block, the location of said first block, the location of said second block, the location of said third block, and the length delta are selected to provide for a laminated blank having a center of mass located at a predefined point along said longitudinally extending axis.

49. (withdrawn) A laminated blank having a predetermined exterior as in claim 47, wherein the opposed faces of said first plurality of thin strips are substantially perpendicular to the opposed faces of said second plurality of thin strips.

50. (withdrawn) A laminated blank having a predetermined exterior as in claim 47, wherein said first block and said second block are disposed apart to one another along the width of the bat.

51. (withdrawn) A laminated blank having a predetermined exterior as in claim 47, wherein said first block and said second block are disposed apart to one another the length of the bat.

52. (withdrawn) A laminated blank having a predetermined exterior as in claim 47, wherein each of said first plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about $1/32^{\text{nd}}$ of an inch to about $1/12^{\text{th}}$ of an inch.

53. (withdrawn) A laminated blank having a predetermined exterior as in claim 47, wherein each of said third plurality of thin strips has a thickness defined as the shortest distance between said opposed faces and wherein said thickness is between about 0.00787 inches to about 0.375 inches.

(9) EVIDENCE APPENDIX

NONE.

(10) RELATED PROCEEDINGS APENDIX

NONE.

Based on the above arguments, Applicants respectfully request favorable action and withdrawal of the present rejections for all claims. The Examiner is invited to call the undersigned at his convenience to resolve any remaining issues. Please charge any additional fees required by this Amendment to Deposit Account No. 503176.

Respectfully submitted,

October 28, 2006

Date

/ William Monty Simmons /

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